SJE-Rhombus

SJE-Rhombus (Suzhou) Co., Ltd.

Installation and Operating Instructions

SJE QUEST™ PUMP SWITCH

SJE-Rhombus® pump switches provide automatic control of pumps in non-potable water applications.

SPECIFICATIONS

This equipment is rated to 50ºC. Approved for use in non-potable water.

SJE QUEST™

CABLE: Flexible H07RN 1mm² 2 or 3 conductor (H05VV also available)

FLOAT HOUSING: Non-toxic corrosion resistant polyproplylene, has IP68 protection to a water depth of 1 meter.

ELECTRICAL:

Type of Load R-M = resistance-motor load
250 VAC Rated Voltage:
Maximum Pump Running Current: 10 (8) amps
Frequency: 50/60 Hz
Microdisconnect
Number Automatic Cycles: 5E4

Function Class I or II
SJE Quest™ - 2 wire - Function Class II ⧈
SJE Quest™ - NO or NC with ground plate - Function Class I
SJE Quest™ - SPDT Function Class II ⧈

CONSTRUCTION DETAILS:

Degree Protection: IP68 1 meter 168hr
Resistance Heat Fire: Category D
Water Temp: TL50
Ambient Temp : TL50
Type of Action: 1B
Type of Construction: In-line cord control
PTI: 250
Pollution Degree: 2

Switch must be used with pumps that provide integral thermal overload protection. Switch is not recommended for controlling electric loads less than 100 milliamps, 12 VAC or non-arcing electric loads. Switch should not be used as main isolating switch for power supply.

PREVENTATIVE MAINTENANCE

- Periodically inspect the product. Check that the cable has not become worn or that the housing has not been damaged so as to impair the protection of the product. Replace the product immediately if any damage is found or suspected.
- H05VV cable can stiffen over time. Monitor for stiffening or cracking. Replace the product immediately if any damage is found or suspected.
- Periodically check to see that the float is free to move and operate the switch.
- Use only SJE-Rhombus® replacement parts.

SJE-RHOMBUS® TWO-YEAR LIMITED WARRANTY

SJE-RHOMBUS® warrants to the original consumer that this product shall be free of manufacturing defects for two years after the date of consumer purchase. During that time period and subject to the conditions set forth below, **SJE-RHOMBUS®** will repair or replace, for the original consumer, any component which proves to be defective due to defective materials or workmanship of **SJE-RHOMBUS®**.

THIS EXPRESS WARRANTY DOES NOT APPLY TO THE MOTOR START KIT COMPONENT. SJE-RHOMBUS® MAKES NO WARRANTIES OF ANY TYPE WITH RESPECT TO THE MOTOR START KIT.

ELECTRICAL WIRING AND SERVICING OF THIS PRODUCT MUST BE PERFORMED BY A LICENSED ELECTRICIAN.

THIS WARRANTY DOES NOT APPLY: (A) to damage due to lightning or conditions beyond the control of **SJE-RHOMBUS®**; **(B)** to defects or malfunctions resulting from failure to properly install, operate or maintain the unit in accordance with printed instructions provided; **(C)** to failures resulting from abuse, misuse, accident, or negligence; **(D)** to units which are not installed in accordance with applicable local codes, ordinances, or accepted trade practices, and **(E)** to units repaired and/or modified without prior authorization from **SJE-RHOMBUS®**.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

TO OBTAIN WARRANTY SERVICE: The consumer shall assume all responsibility and expense for removal, reinstallation, and freight. Any item to be repaired or replaced under this warranty must be returned to **SJE-RHOMBUS®**, or such place as designated by **SJE-RHOMBUS®**.

ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS ARE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. SJE-RHOMBUS® SHALL NOT, IN ANY MANNER, BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES AS A RESULT OF A BREACH OF THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY.

⚠WARNING **ELECTRICAL SHOCK HAZARD**

Disconnect power before installing or servicing this product. A qualified service person must install and service this product according to applicable electrical and plumbing codes. Switch should not be used as main isolating switch for power supply.

⚠WARNING **EXPLOSION OR FIRE HAZARD**

Do not use this product with flammable liquids. Do not install in hazardous locations as defined by National Codes or other governing body.

Failure to follow these precautions could result in serious injury or death. Replace product immediately if switch cable becomes damaged or severed. Keep these instructions with warranty after installation. This product must be installed in accordance with local and national electric codes, so as to prevent moisture from entering or accumulating within boxes, conduit bodies, fittings, float housing, or cable.

For detailed specifications on this product, or for the complete line of SJE-Rhombus® panel, alarm, and switch products, visit our web site at www.sjerhombus.cn

MOUNTING THE SWITCH

WARNING: Switch has not been evaluated for use in potable water.
WARNING: Do not install switch in direct line of incoming liquid.

Pipe Clamp Installation (Figure A):

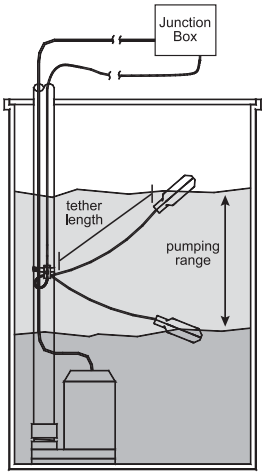
1. Place the cord into the clamp as shown in Figure A.
2. Locate clamp at desired activation level and secure the clamp to the discharge pipe as shown in Figure A. **Note:** Do not install cord under hose clamp.
3. Tighten the hose clamp using screwdriver. Over tightening may result in damage to the plastic clamp. Make sure the float cable is not allowed to touch the excess hose clamp band during operation.
4. Wire switch as shown in Figure C.
5. Check installation. Allow system to cycle to insure proper operation. Be sure float has free range of motion and does not touch anything.

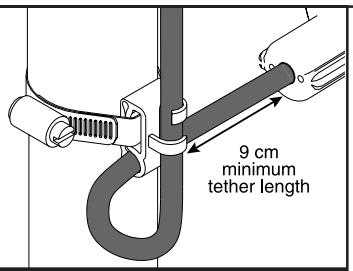
Note: All hose clamp components are made of 18-8 stainless steel material. See your SJE-Rhombus® supplier for replacements.

Cable Weight Installation (Figure B):

1. Place the cord through cable weight as shown in Figure B.
2. Locate cable weight at desired activation level. Lock position of cable weight by turning lid counter clockwise. Note: If position adjustment is needed, push down on lid and turn clockwise to loosen.
3. Wire switch as shown in Figure C.
4. Check installation. Allow system to cycle to insure proper operation. Be sure float has free range of motion and does not touch anything.

Figure A



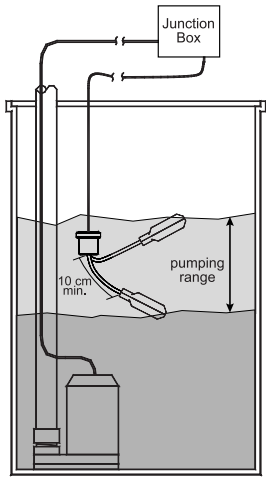


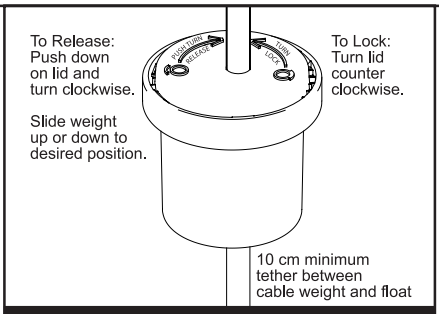
Determining Pumping Range in Centimeters

tether length	9	15	23	30	38	46
pumping range	23	30	45	60	75	91

Due to weight of cable, pumping range above horizontal is NOT equal to pumping range below horizontal. Use values published as a guide. Pumping ranges are based on testing in non-turbulent conditions. Range may vary due to water temperature, cord type and cord shape. Note: As the tether length increases, so does the variance of the pumping range.

Figure B



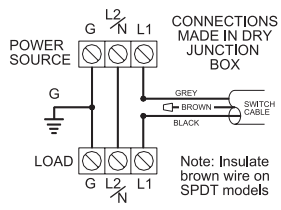
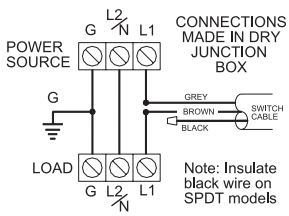
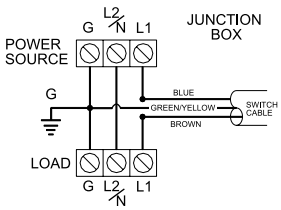
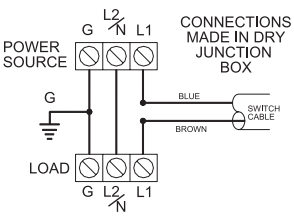


Determining Pumping Range in Centimeters

tether length	10	14	18	22	26	30
pumping range	25	30	36	41	45	51

Use values published as a guide. Pumping ranges are based on testing in non-turbulent conditions. Range may vary due to water temperature, cord type and cord shape. Note: As the tether length increases, so does the variance of the pumping range.

Figure C

SJE QUEST™ SPDT ONLY 125/250 VAC NORMALLY OPEN/PUMP DOWN	SJE QUEST™ SPDT ONLY 125/250 VAC NORMALLY CLOSED/PUMP UP	SJE QUEST™ w/ground plate 125/250 VAC	SJE QUEST™ NORMALLY OPEN/NORMALLY CLOSED
			

⚠WARNING

In 250 VAC installations, one side of the line going to the load is always **HOT**. This condition exists if the switch is on or off. Install double pole disconnect on all 230 VAC circuits.

On SPDT models, insulate unused brown or black wires with wire nut. Wire can become electrically hot.

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